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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/540,166	03/31/2000	Scott A. Rosenberg	042390.P6729	2691

7590 01/13/2004

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EXAMINER
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KOVALICK, VINCENT E

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 01/13/2004

*26*

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/540,166

**Applicant(s)**

ROSENBERG

**Examiner**

Vincent E Kovalick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3-7, 10-15 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-7, 10-15 and 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                      6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

***Response to Appeal Brief***

1. In view of the Appeal Brief filed on October 31, 2003 PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

3. This Office Action is in response to Applicant's Appeal Brief dated October 31, 2003 in response to USPTO Final Office Action dated May 27, 2003. In consideration of Applicant's arguments set forth in said Appeal Brief, the said Final Rejection is herewith withdrawn and a further Action is set forth as indicated hereinbelow.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 5, 10, 12, 15 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emerson et al. (USP 6,664,969) taken with Gupta (USP 5,113,180).

Relative to claims 3, 10 and 15, Emerson et al. **teaches** an operating system independent method and apparatus for graphical remote access (col. 2, lines 22-64); Emerson et al. further **teaches** a system to refresh a display the system comprising: a memory to store images of an image frame in a plurality of memory pages (col. 5, lines 31-35); a processor to perform drawing operations to generate the images for the image frame (col. 5, lines 21-39); and a display controller in communication with the memory to access the image frame and to send only the marked memory pages of the image frame to the display to refresh the display (col. 2, lines 22-35 and col. 5, lines 46-52).

Emerson et al. **does not teach** the processor marking memory pages corresponding to regions of the image frame that have been updated;

Emerson et al. teaches remotely displaying graphics-mode display data of the accessed computer system.

Gupta et al. **teaches** a virtual display adapter which includes means for accessing and updating a plurality of display bitmaps of significant size which may be located in non-resident memory as well as in display memory (col. 4, lines 55-64); Gupta et al. further **teaches** the processor marking memory pages corresponding to regions of the image frame that have been updated; (col. 9, lines 46-52).

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It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Emerson et al. the feature as taught by Gupta et al. in order to include in the system the feature of updating the images with data from only those memory pages that have been marked indicating they have been updated.

Regarding claims 5 and 12, it would have been obvious to a person of ordinary skill in the art at the time of the invention that the capacity of the memory pages would be sufficient to accommodate the system data storage/processing, this would include a memory page size of four kilobytes if that is specified as a system requirement.

Relative to claims 21-22, Emerson et al. further **teaches** the system wherein the display controller sends the image frame one memory unit at a time to the display to refresh the display (col. 2, lines 21-36).

It would have been obvious to a person of ordinary skill in the art at the time of the invention that with the means to select specific units of marked memory for display, the means could be structured and directed to select a defined quantity of data (e.g. a specific memory page) for transfer to be displayed.

6. Claims 4, 11, 18, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emerson et al. taken with Gupta et al. as applied to claims 3, 10 and 15 respectively in item 5 hereinabove, and further in view of Broemmelsiek (USP 5,574,836).

Relative to claims 4, 11, 18, 23 and 24, Emerson et al. taken with Gupta et al. **does not teach** said system wherein the image frame is divided into tiles representing two-dimensional regions of the image frame, each of the tiles is stored in one separate memory page.

Emerson et al. taken with Gupta et al. teaches remotely displaying graphics-mode display data of the accessed computer system with memory pages marked to indicate image changes.

Broemmelsiek **teaches** an interactive display apparatus (col. 3, lines 60-67 and col. 4, lines 1-49); Broemmelsiek further **teaches** said system wherein the image frame is divided into tiles

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representing two-dimensional regions of the image frame, each of the tiles is stored in one separate memory page (col. 4, lines 32-47).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Emerson et al. taken with Gupta et al. the feature as taught by Broemmelsiek in order to enable display speed performance necessary for certain display environments (Broemmelsiek, col. 4, lines 28-32)

7. Claims 6, 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emerson et al. taken with Gupta et al. as applied to claims 3, 10 and 15 respectively in item 5 hereinabove, and further in view of Forkey (USP 5,733,246).

Regarding claims 6, 13 and 19, Emerson et al. taken with Gupta et al. **does not teach** the said system wherein the image frame is represented by a configuration where color components of a pixel are deposited in contiguous memory locations.

Emerson et al. taken with Gupta et al. teaches remotely displaying graphics-mode display data of the accessed computer system with memory pages marked to indicate image changes.

Forkey **teaches** a viewing instrument that can obtain color images of dimly illuminated objects (col. 4, lines 37-67 and col. 5, lines 1-21); Forkey further **teaches** the said system wherein the image frame is represented by a configuration where color components of a pixel are deposited in contiguous memory locations (col. 6, lines 63-67 and col. 7, lines 1-8).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Emerson et al. taken with Gupta et al. in view of Broemmelsiek the features as taught by Forkey in order to minimize color image processing time and produce high quality color images.

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8. Claims 7, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emerson et al. taken with Gupta et al. as applied to claims 3, 10 and 15 respectively in item 5 hereinabove, and further in view of Drewry (USP 5,748,178).

Relative to claims 7, 14 and 20,) Emmerson et al. taken with Gupta et al. **does not teach** a system wherein the image frame is represented by a configuration where color components of a pixel are separated and deposited in multiple color planes.

Emerson et al. taken with Gupta et al. teaches remotely displaying graphics-mode display data of the accessed computer system with memory pages marked to indicate image changes.

Drewry **teaches** a digital video system and methods for efficient rendering of superimposed vector graphics (col. 2, lines 66-67; col. 3, lines 1-67 and col. 4, lines 1-4); Drewry further **teaches** a system wherein the image frame is represented by a configuration where color components of a pixel are separated and deposited in multiple color planes (col. 6, lines 12-22). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Emerson et al. taken with Gupta et al .the features as taught by Drewry in order to minimize color image processing time.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	6,263,426	Abdallah et al.
U. S. Patent No.	6,173,381	Dye
U. S. Patent No.	6,008,823	Rhoden et al.
U. S. Patent No.	6,002,411	Dye
U. S. Patent No.	5,596,376	Howe
U. S. Patent No.	5,486,876	Lew et al.

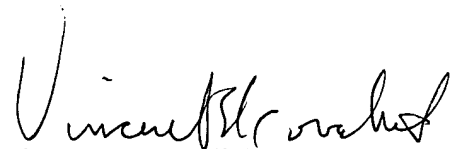
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***Responses***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E Kovalick whose telephone number is 703 306-3020. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.

  
Vincent E. Kovalick  
January 8, 2004

  
BIPIN SHALWALA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600